

Application No. 10/759,112
Reply dated October 7, 2005
Response to Office Action dated June 7, 2005

REMARKS

Favorable consideration and allowance are respectfully requested for Claims 1-59 in view of the following remarks. The Examiner is thanked for the careful review and consideration of this case and the notices that Claims 1-24 are allowed and that Claim 34 would be allowable if rewritten in independent form are appreciated. The Examiner's stated reasons for allowance are acknowledged and the Applicant submits that the claims are allowable for a variety of reasons, which are not limited to the reasons recited in the Office Action.

The Examiner is also thanked for the courtesies extended during the personal interview held September 7, 2005, the substance of which is reflected herein.

The rejection of Claims 25-33 and 35-59 under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 6,066,405 (Schaeffer) is respectfully traversed. Independent Claim 25 is directed to a component with a platinum-aluminum substrate surface region where, among other things, at least one of the platinum content and the aluminum content are essentially constant in a zone from the substrate surface region starting from the substrate surface or a point directly beneath the substrate surface to a pre-determined depth of the substrate surface region.

Claims 26-41 are dependent from Claim 25, either directly or indirectly, and therefore include this limitation.

Schaeffer relates to a metallic over-coating for nickel-based super alloys, see the Summary of the Invention in column 2. The abstract indicates that a platinum-aluminide region is produced by diffusing platinum into the substrate surface and thereafter diffusing aluminum into the substrate surface. This is also shown in figure 3 which teaches first depositing platinum on a substrate 52 and then

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diffusing platinum into the substrate 54 and then providing aluminum 56 and diffusing aluminum into the substrate 58.

A person of skill in the art would not expect this method to produce a component as claimed where at least one of the platinum content and the aluminum content are essentially constant from the surface of the component to a predetermined depth below the surface. Indeed, Schaeffer teaches that after the diffusion treatment is complete, the chemical compositions of the region varies as a function of depth below the surface, see column 5, lines 8-13. Schaeffer continues to state that the aluminum content and platinum content are relatively high adjacent to the surface and decrease with increasing depth into the region and the substrate. See column 5, lines 13-15. Indeed, because the composition varies with depth, measurement of the compositions of the surface region requires a special integration method, see column 5, lines 21-22.

Accordingly, Schaeffer does not teach a component as claimed where at least one of the platinum content and the aluminum content is essentially constant in a zone of the substrate surface region. Further, Schaeffer provides no suggestion of such a component.

Claim 42 is similar to Claim 25 in that Claim 42 also requires that at least one of the aluminum content and the platinum content remain essentially constant in a zone of the substrate surface region. Claims 43-51 are dependent from Claim 42 and therefore include this limitation. Independent Claim 52 also requires that at least one of the aluminum content and the platinum content are essentially constant in a zone of the substrate surface region. Claims 53-59 are dependent from Claim 52 and include all of the limitations thereof.

As explained above, with respect to Independent Claim 25, Schaeffer fails to teach a component having a platinum-aluminum substrate surface region where at

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least one of the aluminum content and the platinum content is essentially constant in a zone of the substrate surface region.

The reference teaches a significantly different substrate where the content of the surface region varies with depth into the substrate, as explained above. The reference provides no teaching to a person of skill in the art of how to arrive at a substrate with a surface region having an essentially constant aluminum content or platinum content. Further, on the present record there is no showing of any suggestion or motivation to a person of skill in the art to try to modify the teachings of Schaeffer so as to arrive at a method as presently claimed.

During manufacturing processes for producing the presently-claimed components the industrial standard for the content of the platinum and aluminum includes a variance of +/- 10%. The phrase "essentially constant" as it appears in claims 25, 42 and 52 necessarily includes this variance achieved during industrial manufacturing of the claimed components. Accordingly, the phrase "essentially constant" includes a variance of +/- 10% in the platinum and aluminum content.

Claims 25, 42 and 52 are amended to clarify the depth of the zone of the substrate surface region. In particular, certain elements from previously pending claim 30, which help to define the depth of the zone, are incorporated to these claims. Accordingly, a person of skill in the art could determine the boundaries of the zone.

Claims 30 and 47 are cancelled, without prejudice and without any disclaimer of the subject matter therein.

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Because the cited reference fails to teach each and every element of the claimed invention and because there is no suggestion or motivation to a person of skill in the art to try to modify the reference so as to arrive at the claimed invention, a *prima facie* case of obviousness has not been made. See MPEP §706.02(j), requiring each of these elements for a proper obviousness rejection.

In view of the foregoing, reconsideration and withdrawal of the rejection are respectfully requested.

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CONCLUSION

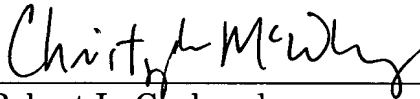
In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #011235.53144US).

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Respectfully submitted,



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